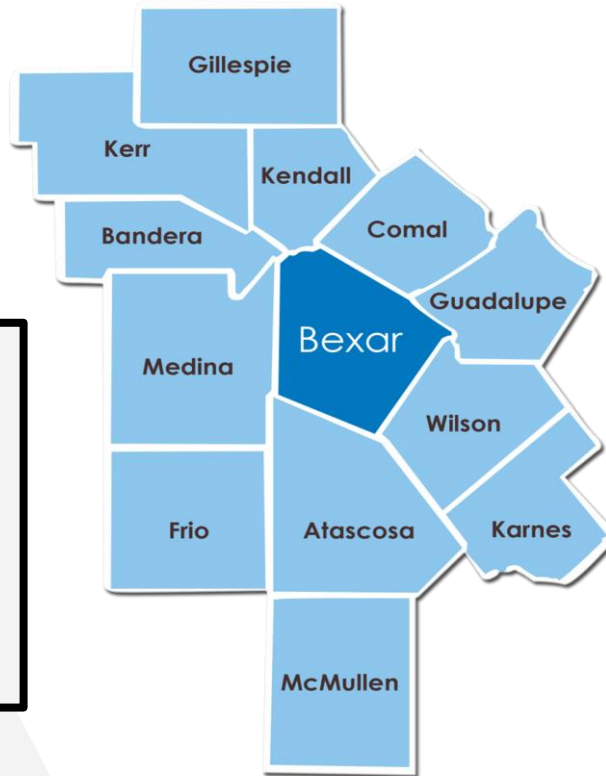




# Regional and Community Programs

## Who We Serve

Atascosa, Bandera, Bexar, Comal, Frio, Gillespie, Guadalupe, Karnes, Kendall, Kerr, Medina, McMullen, and Wilson counties.



AACOG serves the Alamo Area/State Planning Region 18, which covers  
**13 counties and  
12,582 square miles.**

Our area covers more land than:  
Maryland, Hawaii,  
Massachusetts, Vermont,  
New Hampshire, New Jersey,  
Connecticut and Delaware.

## What We Do

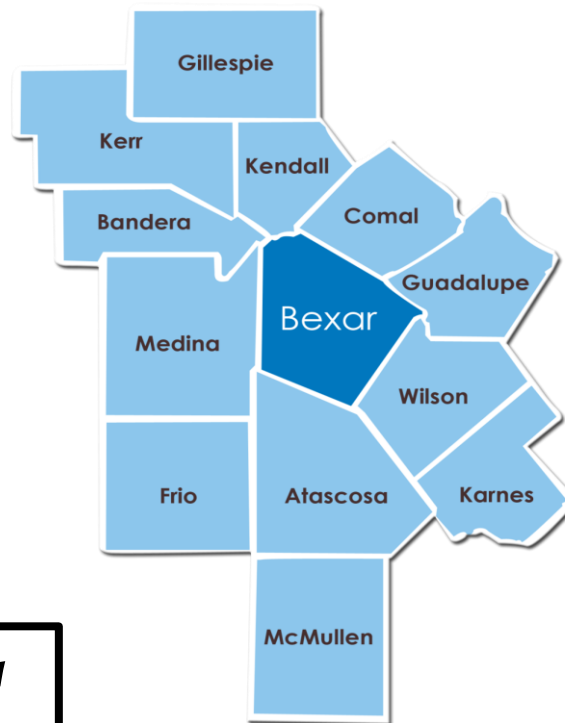
AACOG is a **political subdivision of the State of Texas**, and was established in 1967 under Chapter 391 of the Local Government Code as

**A voluntary association of local governments and organizations**

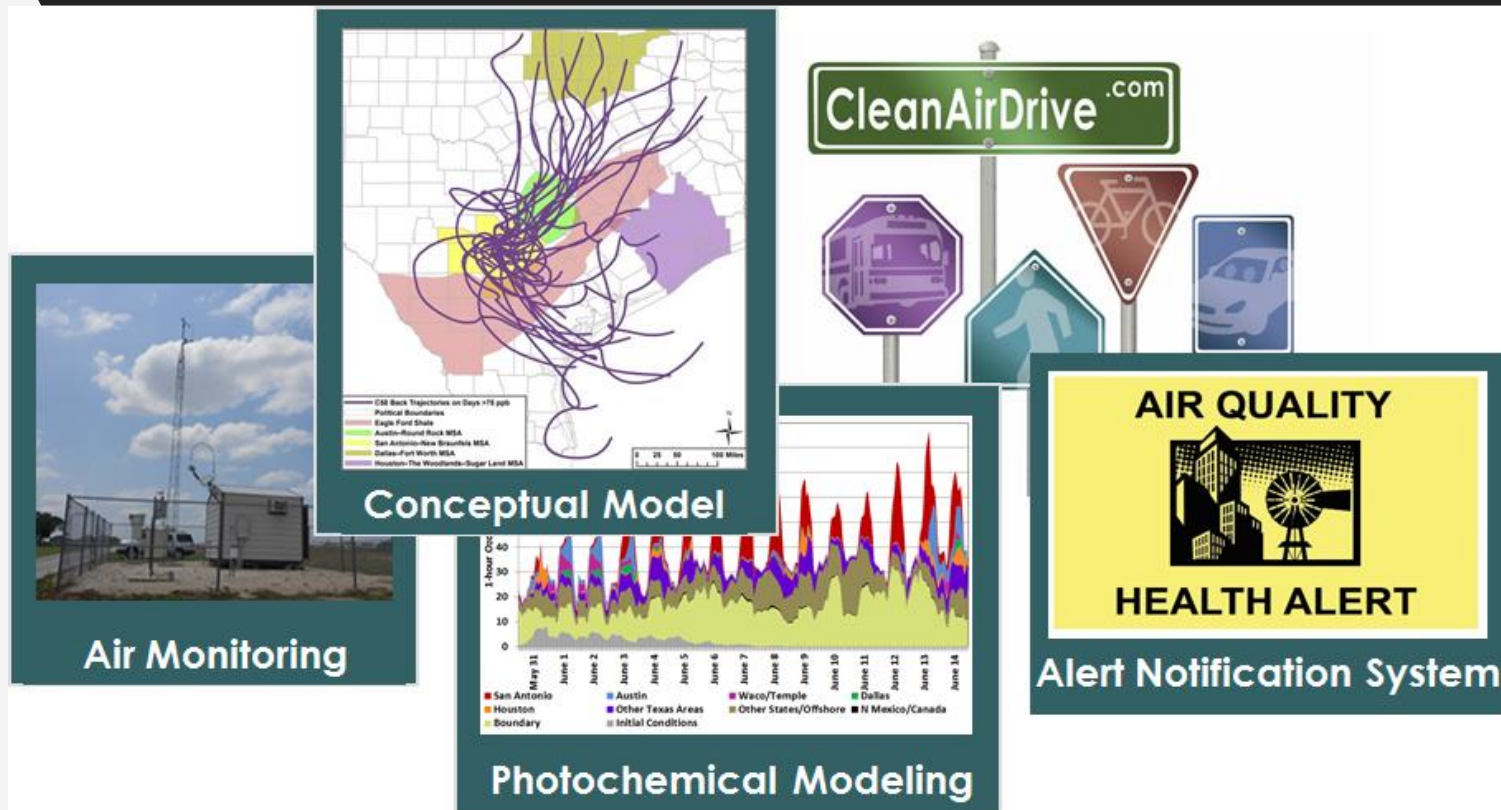
That serves its members through :

- planning,
- information, and
- coordination activities.

***"BEXAR COUNTY IS BIGGER THAN 11 STATES, POPULATION-WISE,"***



# AACOG's Air Quality Programs



# ***WHAT'S IN OUR AIR?***



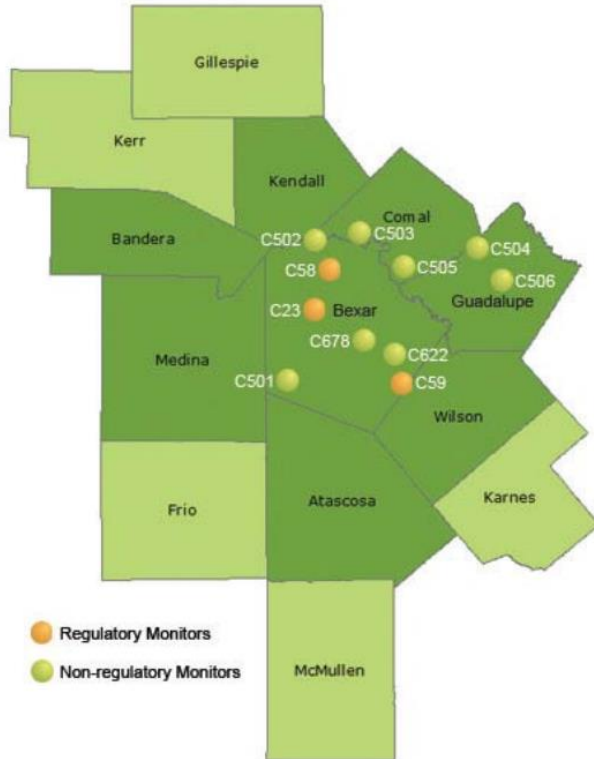


# Ozone Monitors



[Links to live air quality maps](#)

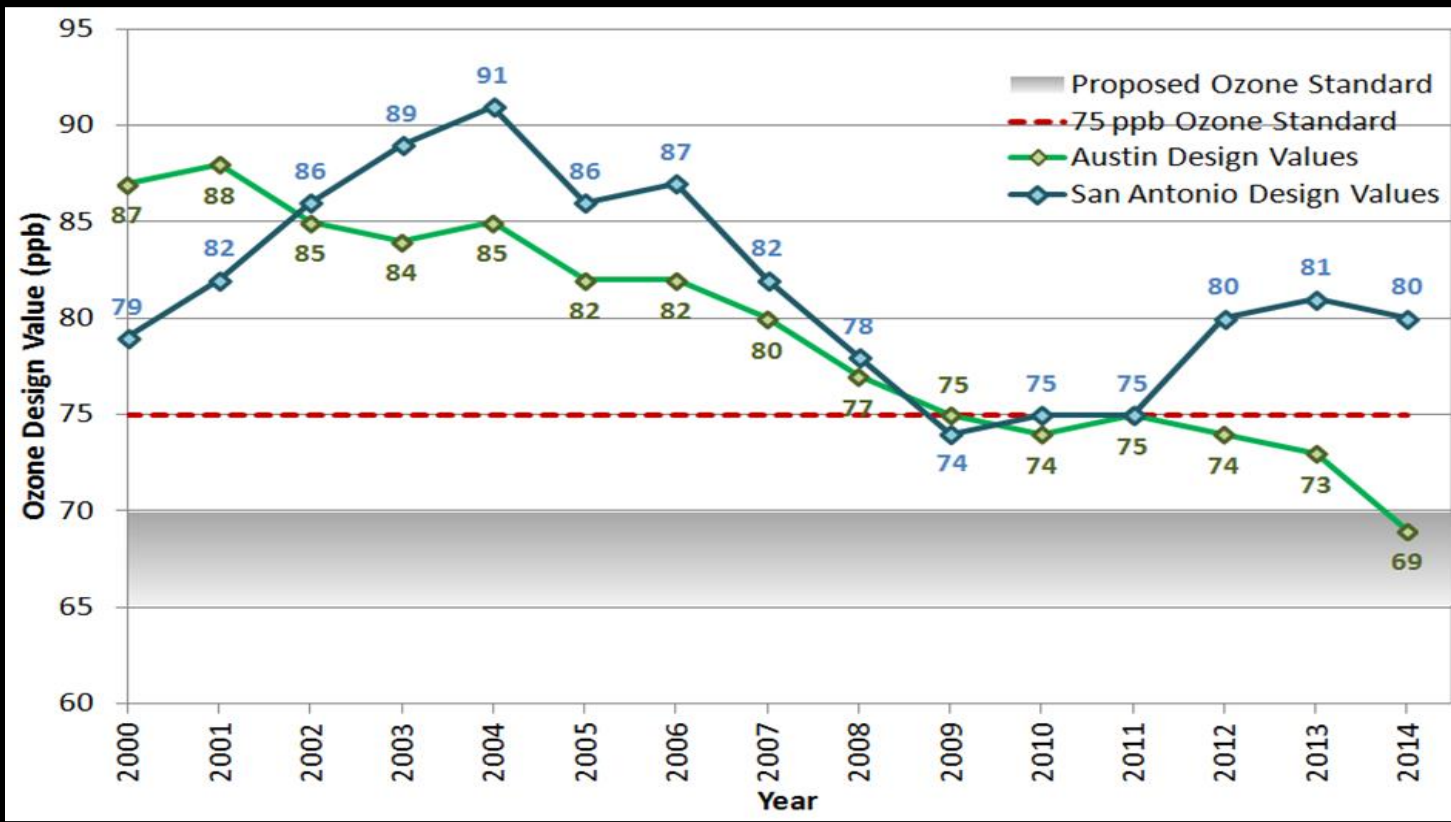
# Air Monitoring – How do we detect what is in the air?



Designation / Site Name	Location Description	Data Measured	First date of reporting (online) / Currently maintained by
C23 Marshall High School	6655 Bluebird Lane San Antonio	O <sub>3</sub> , meteorology	September 17, 1996 TCEQ
C58 Camp Bullis	Near Wilderness Road, San Antonio	NO <sub>x</sub> , O <sub>3</sub> , meteorology	August 12, 1998 TCEQ
C59 Calaveras Lake	14620 Laguna Road San Antonio	SO <sub>2</sub> , NO <sub>x</sub> , O <sub>3</sub> , PM <sub>2.5</sub> , meteorology	May 13, 1998 CPS San Antonio Metropolitan Health District
C678 CPS Pecan Valley	802 Pecan Valley Dr. San Antonio	CO, SO <sub>2</sub> , NO <sub>x</sub> , O <sub>3</sub> , PM <sub>2.5</sub> , meteorology	March 4, 1999 Dios Dado for CPS
C501 Elm Creek ES	11535 Pearsall Road Bexar County	O <sub>3</sub> , meteorology	June 17, 2002 Dios Dado for AACOG
C502 Fair Oaks Ranch	7286 Dietz Elkhorn Rd, Fair Oaks Ranch	O <sub>3</sub> , meteorology	June 28, 2002 Dios Dado for AACOG
C503 Bulverde ES	1715 E. Ammann Rd. Bulverde, Comal County	O <sub>3</sub> , meteorology	August 26, 2002 Dios Dado for AACOG
C504 New Braunfels Airport	2090 Airport Rd. New Braunfels, Guadalupe County	Ozone	August 30, 2002 Dios Dado for AACOG
C505 Garden Ridge	21340 FM 3009 City of Garden Ridge	Ozone	March 26, 2003 Dios Dado for AACOG
C506 Seguin Outdoor Learning Center	1865 Hwy 90 East City of Seguin	Ozone	March 26, 2003 Dios Dado for AACOG
C622 Heritage Middle School	7145 Gardner Road San Antonio	CO, SO <sub>2</sub> , NO <sub>x</sub> , O <sub>3</sub> , PM <sub>2.5</sub> , meteorology	July 29, 2004 Dios Dado for CPS

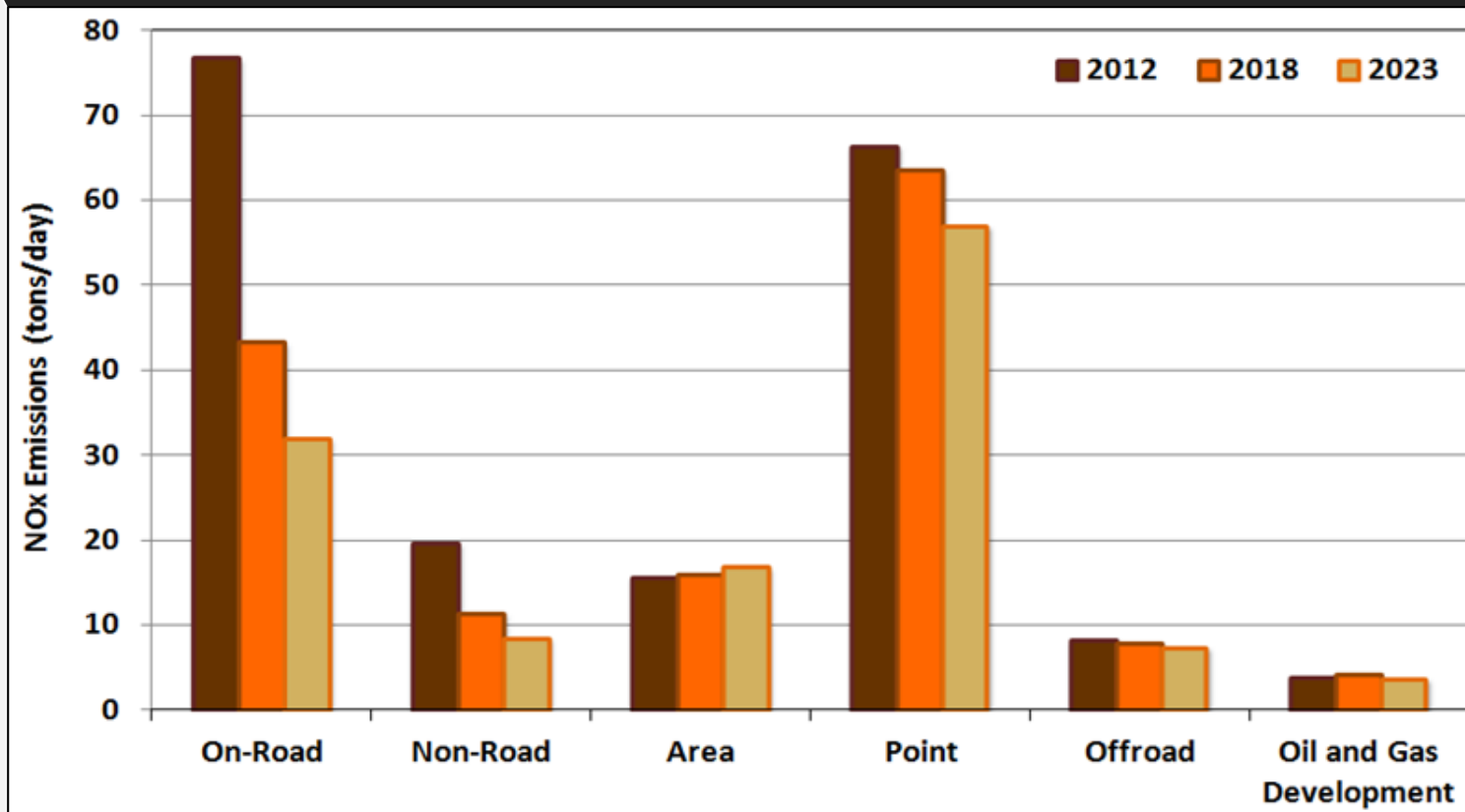
All units detect ozone – Only 3 are regulatory

# Historical Context



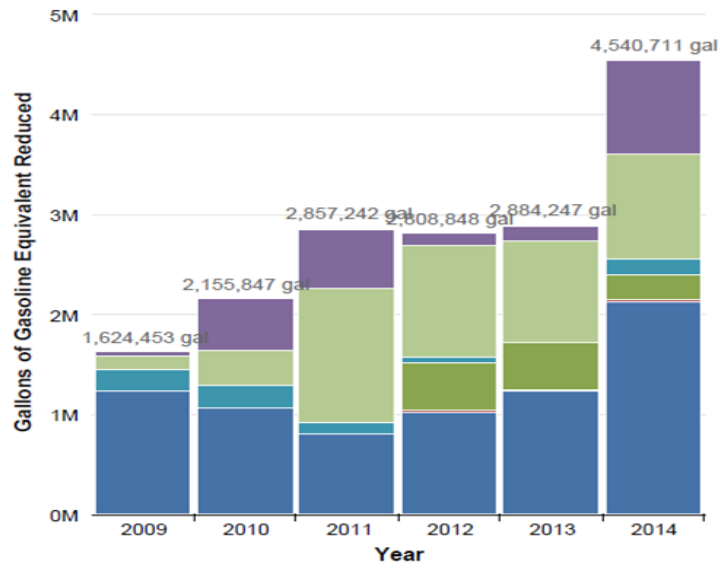


## Where Are We Headed?



# ALAMO AREA CLEAN CITIES COALITION

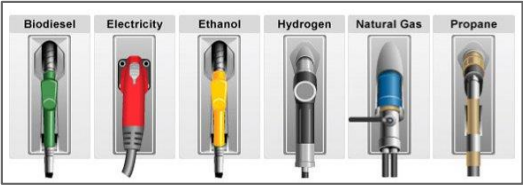
Historical Gallons of Gasoline Equivalent Reduced



- Off-Road Vehicles
- Fuel Economy Improvements
- Vehicle Miles Traveled Reductions
- Idle Reduction
- Hybrid Vehicles
- Electric & Plug-In Vehicles
- Alternative Fuel Vehicles



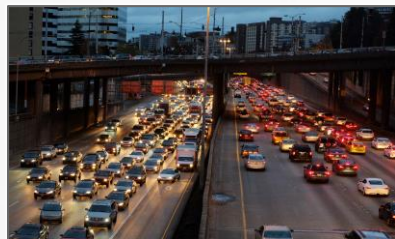
**GRANT ASSISTANCE**



**ALTERNATIVE FUELS**



**SMART MOBILITY**



## Solar Programs in San Antonio

- San Antonio ranked #1 in Texas and #7 in the US for solar capacity  
“CPS Energy, through power purchase agreements with operators from across the country, has nine solar farms generating 230 megawatts of renewable power – the most in Texas.”

Roofless Solar – Clean Energy Collective 1.2MW Farm (11,280 panels)  
Schertz Texas Solar Purchase

Low income Solar Roof Lease

Solar Rebate – Funds running low. Next Steps for local solar?

## AACOG's Weatherization Assistance Program

Income Eligibility → Energy Audit → Installation → Final Inspection

\*applicant's household income must meet federal income requirements. (125%)

Available in All AACOG counties: Atascosa, Bandera, Bexar, Comal, Frio, Gillespie, Guadalupe, Karnes, Kendall, Kerr, Medina, and Wilson Counties!


Services available: Advanced Energy Audit, Insulation upgrades, installation of gas appliances, repair/replace windows, weather stripping and caulking.

More info at [aacog.com](http://aacog.com)

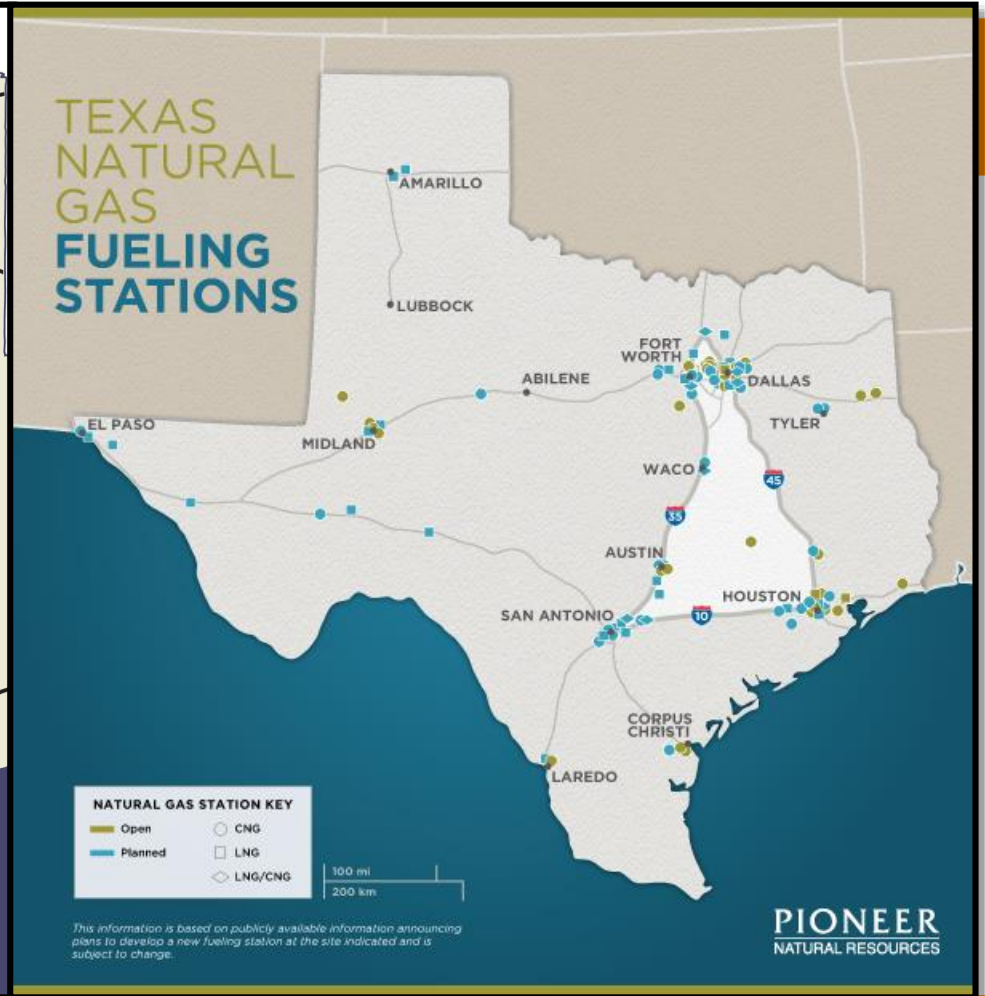
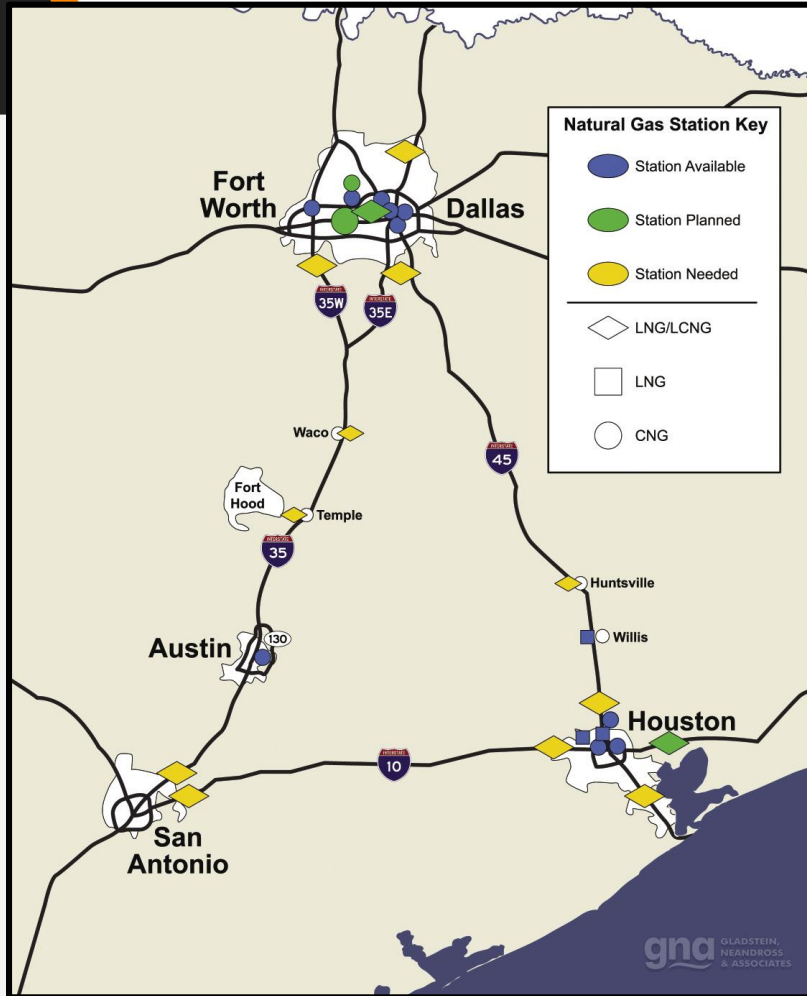


		NSR offset ratio	Major source threshold
<b>EXTREME</b> (20 years to attain)	TRAFFIC CONTROLS DURING CONGESTION	1.5 : 1	10
	CLEAN FUELS REQUIREMENT FOR BOILERS	Extreme	
	PENALTY FEE PROGRAM FOR MAJOR SOURCES	1.3 : 1	25
	LOW VOC REFORMULATED GAS	Severe	
<b>SEVERE</b> (15/17 years to attain)	VMT GROWTH OFFSET;		
	VMT DEMONSTRATION (& TCMs IF NEEDED)	1.2 : 1	50
	NSR REQUIREMENTS. FOR EXISTING SOURCE MODS	Serious	
	ENHANCED I/M		
	CLEAN FUELS PROGRAM (IF APPLICABLE)		
<b>SERIOUS</b> (9 years to attain)	MODELED DEMO OF ATTAINMENT		
	MILESTONE CONTINGENCY MEASURES FOR RFP		
	18% RFP OVER 6 YEARS		
	ENHANCED MONITORING PLAN		
	STAGE II GASOLINE VAPOR RECOVERY	1.15 : 1	100
<b>MODERATE</b> (6 years to attain)	BASIC I/M		
	CONTINGENCY MEASURES FOR FAILURE TO ATTAIN	Moderate	
	15% RFP OVER 6 YEARS		
	MAJOR SOURCE VOC/NO <sub>x</sub> RACT		
<b>MARGINAL</b> (3 years to attain)	ATTAINMENT DEMONSTRATION		
	TRANSPORTATION CONFORMITY DEMONSTRATION	1.1 : 1	100
	NEW SOURCE REVIEW PROGRAM	Marginal	
	MAJOR SOURCE EMISSION STATEMENTS		
	BASELINE EMISSION INVENTORY (EI)		
	PERIODIC EMISSION INVENTORY UPDATES		





# Central Texas Corridor



# ★ TEXAS CLEAN ★ TRANSPORTATION TRIANGLE

BY THE NUMBERS

The fastest growing natural gas  
transportation corridor in the nation

ENCOMPASSES

700  
MILES

IS HOME TO MORE THAN

10% OF THE  
NATION'S  
TRAFFIC



LINKS

5 OF THE 20  
LARGEST CITIES

in the nation with NGV fueling stations

87 CNG and LNG  
FUELING STATIONS OPEN

34 new fueling stations planned

CONTRIBUTES OVER

\$135 MILLION  
to the Texas economy

SUPPORTS NEARLY

& 1,000  
CLEAN-FUEL TECH JOBS

↓ 30%

LOWER FUEL COSTS  
for natural gas fleets

30+ COMPANIES



with fleets in Texas plan to or have already  
moved their fleets to natural gas

Emissions benefits of the TCTT are the annual equivalent of taking

+175,000 CARS

off Texas highways

★ [TexasNaturalGasNow.com](http://TexasNaturalGasNow.com)

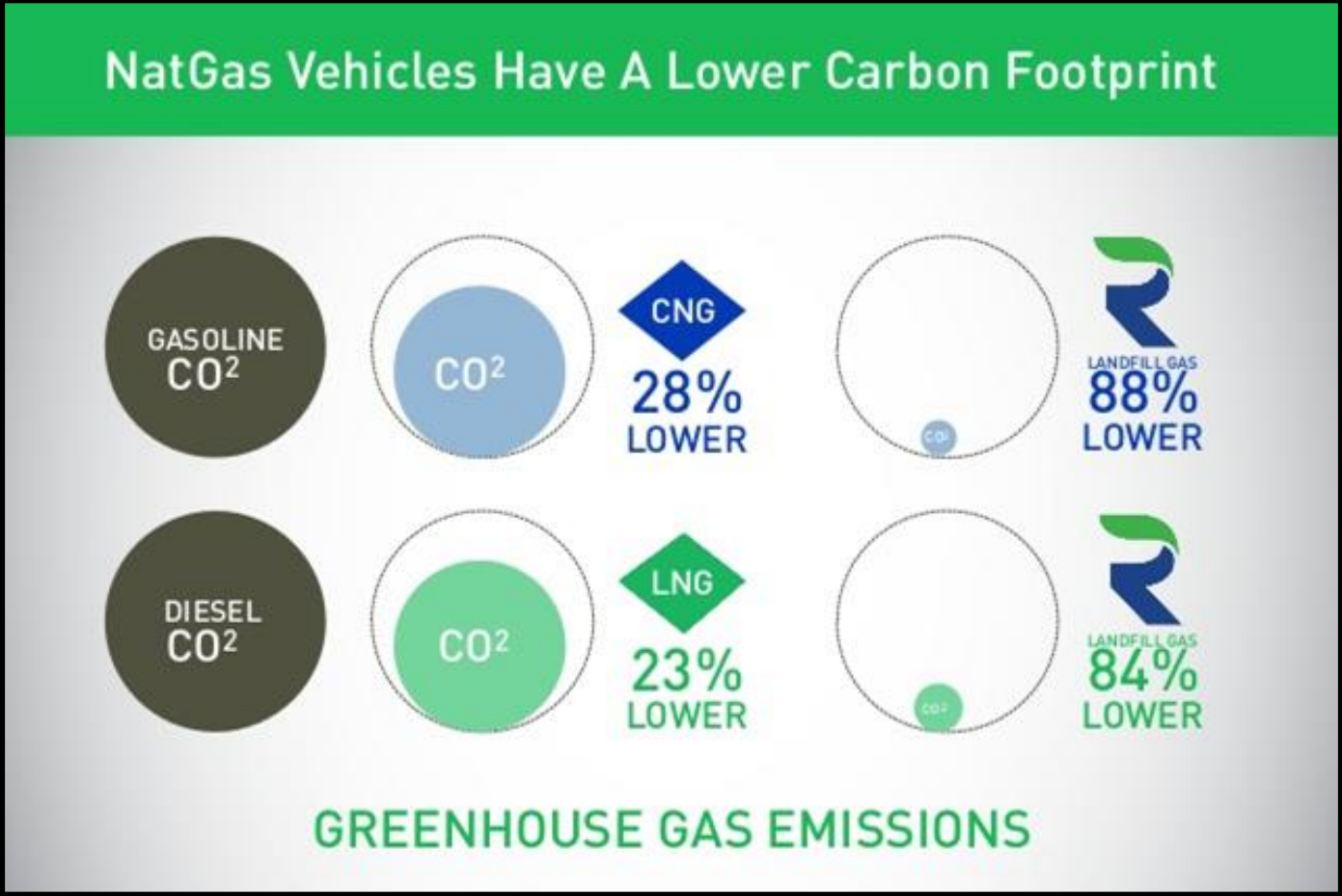
Facebook icon [TexNatGas](#)

Twitter icon [@TexNatGas](#)

TEXAS  
NATURAL GAS  
NOW

A project of   
Anga  
America's  
Natural Gas  
Alliance





# NatGas Vehicles Have A Lower Carbon Footprint

## TEXAS-SIZED SOLUTION

A shift to natgas-powered vehicles yielded **\$128M** in economic impact

LOWER

LOWER

GREENHOUSE GAS EMISSIONS

# REDUCING VEHICLE EMISSIONS WITH CHEMISTRY

Millions of Volkswagen cars have been found to emit up to 40 times more nitrogen oxides in normal operation than they did during emissions testing, miring the company in controversy. This graphic looks at the devices present in a vehicle to help reduce pollution, and how they work.

## POLLUTING COMPOUNDS

**NO<sub>x</sub>**

NITROGEN OXIDES  
E.G. NITRIC OXIDE, NITROGEN DIOXIDE

**CO**

CARBON MONOXIDE

**HC**

UNBURNT HYDROCARBONS  
(FROM FUEL)



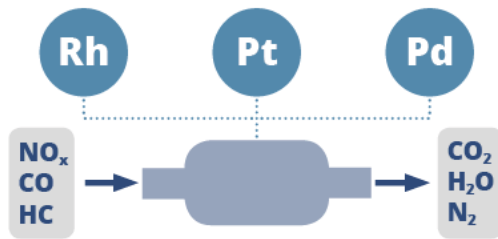
## THE 'DEFEAT DEVICE'

The 'defeat device' found in Volkswagen cars is not a physical device, but a piece of software that detects when the car is being tested. When it detected this, it tuned the engine's performance reducing the NO<sub>x</sub> emissions. In normal driving conditions they were much higher.



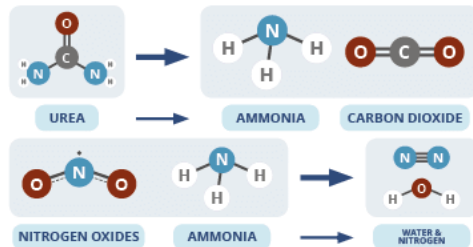
The car detected when it was in test conditions (potentially by monitoring steering wheel movement or traction control deactivation).

## CATALYTIC CONVERTERS



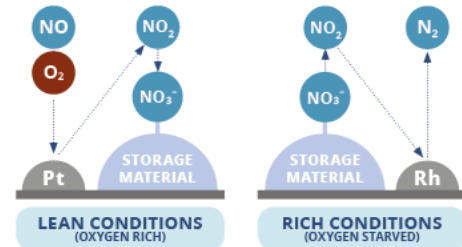
Three-way catalytic converters are present in all petrol-powered cars, and help remove carbon monoxide, unburnt hydrocarbons, and nitrogen oxides. They contain precious metals such as rhodium, platinum, and palladium to accomplish this. Three-way catalytic converters can't be used in diesel engines, as diesel's oxygen-rich exhaust gases make their removal of NO<sub>x</sub> inefficient.

## SELECTIVE CATALYTIC REDUCTION



Selective catalytic reduction (SCR) is a method for NO<sub>x</sub> removal that is utilised in some diesel engines. It involves the injection of urea into the exhaust stream of the vehicle, where it produces ammonia, which is adsorbed onto a catalyst. The ammonia can then react with the nitrogen oxides in the exhaust stream to produce nitrogen and water. SCR is capable of achieving NO<sub>x</sub> reductions of up to 90%.

## NO<sub>x</sub> ADSORBERS



NO<sub>x</sub> adsorbers can also be used in diesel engines. The majority of NO<sub>x</sub> emissions from the diesel engines are NO, and this is converted to NO<sub>2</sub> by reaction with oxygen using a platinum catalyst. The NO<sub>2</sub> is then adsorbed in the form of nitrates by the storage material (often barium oxide). Once the trap is full, the nitrate can be desorbed, converted to nitrogen over a rhodium catalyst, and released.

## WHAT CONSUMERS WERE TOLD THEY WERE GETTING



### HONDA CIVIC EQUIVALENT

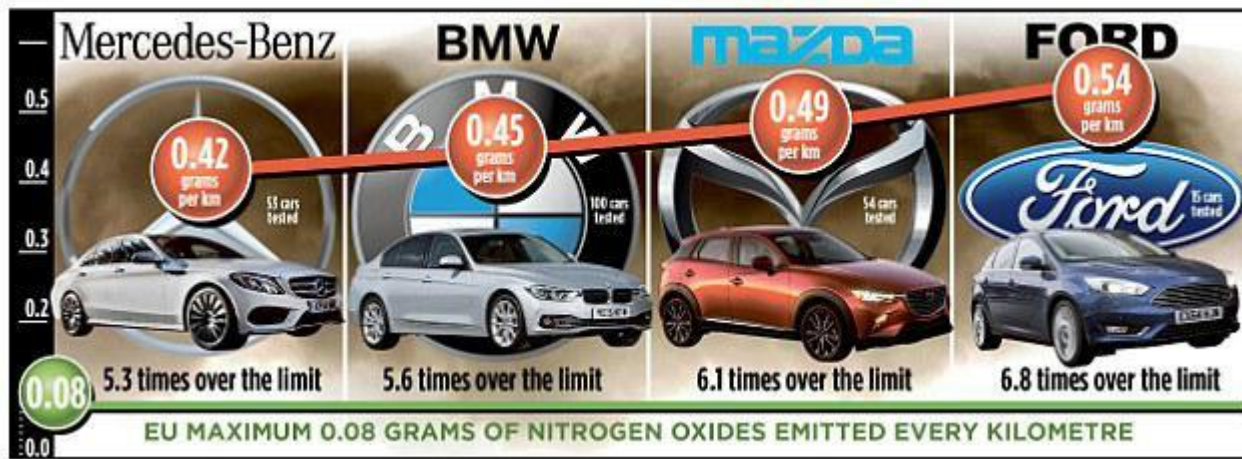
0.48 kilograms of nitrogen oxide per year

## WHAT CONSUMERS ACTUALLY GOT



### 20 FORD F-450 SUPER DUTY TRUCKS

84.0 kilograms of nitrogen oxide per year



# Volkswagen Emissions Cheating Scandal

## **\$14.7 Billion Total**

\$10Billion to buy back cars  
 + \$2.7Billion NOx Reducing  
 + \$2Billion EV infrastructure

## **\$2.7 Billion over 3 years** for Mitigation Actions.

### **Eligible Vehicle Classes/Equipment:**

Class 8 Local Freight Trucks, Port Drayage Trucks  
 Class 4-8 School, Shuttle or Transit Bus  
 Freight Switchers  
 Ferries/Tugboats (marine)  
 Ocean Going Vessels Shorepower  
 Class 4-7 Local Freight Trucks (Medium Trucks)  
 Airport Ground Support Equipment  
 Forklifts  
 LD ZEV Supply Equipment  
 L1, L2 or fast charging equipment  
 LD hydrogen fuel cell vehicle supply equipment

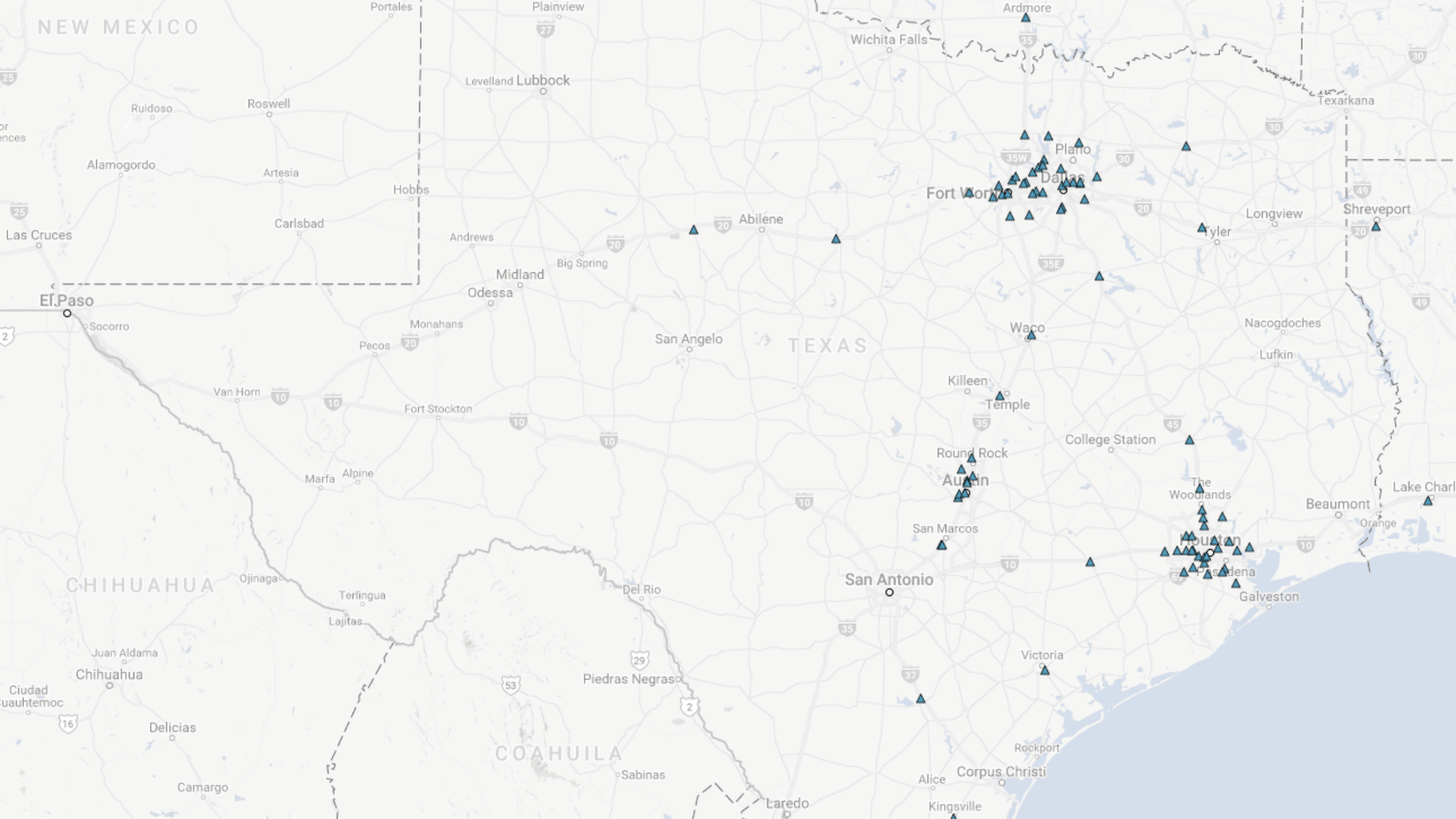
## **\$2 Billion ZEV Investment Commitment over 10years**

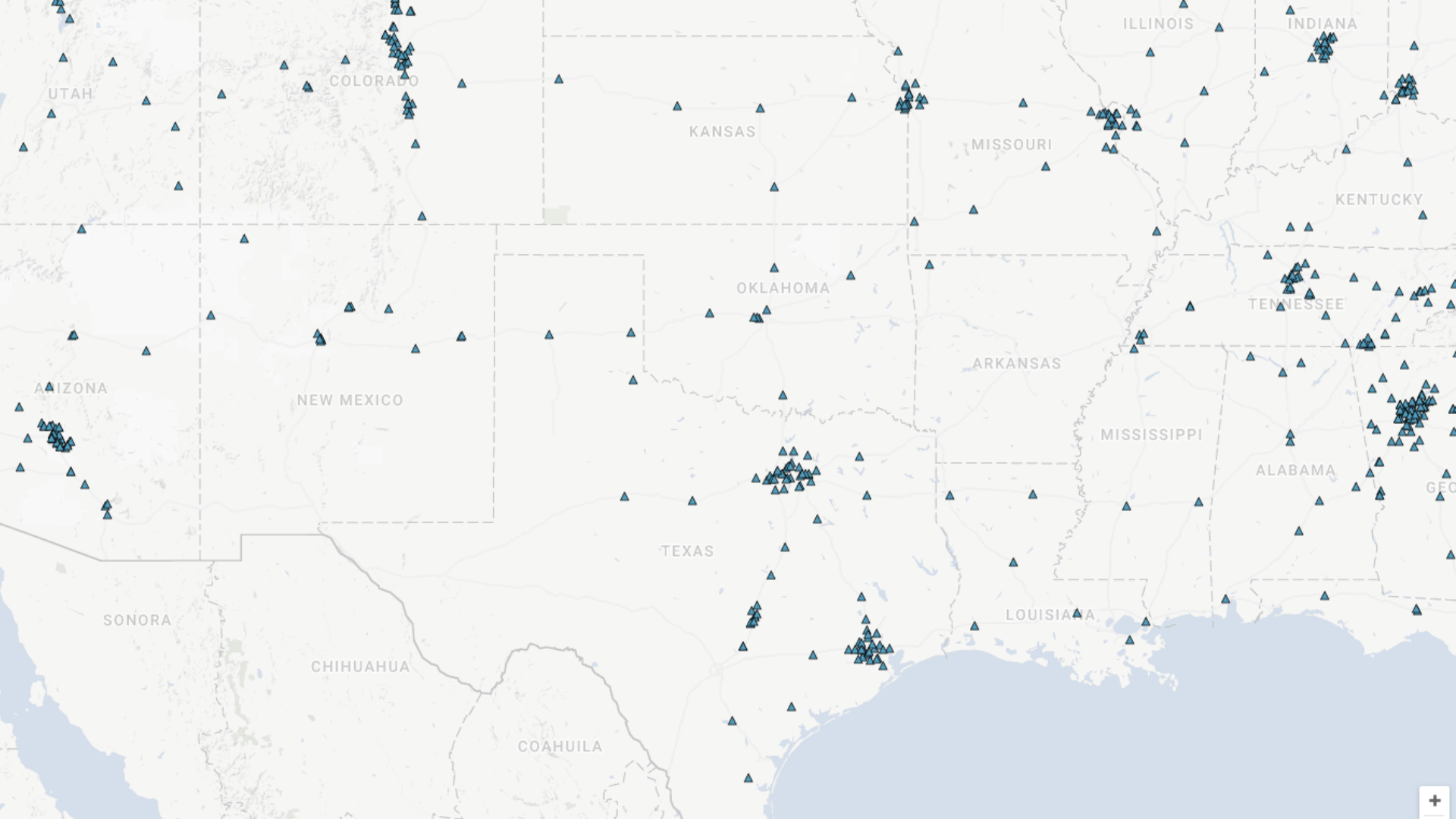
### **National ZEV Investment Plan**

*Developed by VW et al.; approved by EPA, which has sole authority for making decisions.*

\$1.2 Billion in four 30 month investment cycles for U.S., except California







The fleet-wide average will be



Consumers will have saved  
**\$1.7 TRILLION**  
 at the pump over the  
 life of the program.



A family that purchases a new  
 vehicle in 2025 will save

**\$8,200**

in fuel costs when compared with  
 a similar vehicle in 2010.

Over the life of the program, the standards will:

Save **12** billion  
 barrels  
 of oil.



Eliminate **6** billion  
 metric  
 tons  
 of carbon dioxide pollution.



This program, together with standards already put into place by this  
 administration for Model Years 2011-2016, will result in significant  
 cost savings for consumers at the pump, dramatically reduce oil  
 consumption, cut pollution and create jobs.



Smartphone  
 QR Code™

